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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/022,959 | 12/18/2001 | John William Artley | | 7183 |

7590

07/25/2005

Steven L. Schmid
1257 Donald Sts, Suite 2
Jacksonville, FL 32205

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| EXAMINER |
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BOYD, JENNIFER A

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| ART UNIT | PAPER NUMBER |
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1771

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,959

Applicant(s)

ARTLEY ET AL.

Examiner

Jennifer A. Boyd

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The Applicant's Amendments and Accompanying Remarks, filed May 5, 2005, have been entered and have been carefully considered. Claim 1 is pending. In view of Applicant's Terminal Disclaimer over copending application 11/005083 and the Declaration under 37 CFR 1.131, the Examiner withdraws all previously set forth rejections as detailed in Office Action dated March 17, 2005. After another search was conducted, additional prior art has been found which renders in the invention as currently claimed unpatentable for reasons herein below.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Offord et al. (US 6,617,268).

Offord is directed to methods for the treatment of cellulose-containing fibers and yarn (Abstract).

As to claim 1, Offord teaches exposing a fabric to an aqueous solution of an enzyme-repelling chemical such as polyethylene glycol (column 2, lines 15 – 60). The process takes place at a temperature range from about 5 – 185 degrees Celsius and most preferably at room temperature. The fabric is dried at an ambient temperature or at a temperature above ambient up to about 210 degrees Celsius (column 3, lines 1 – 20). The pH of the solution should kept at

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neutral to basic (column 20 – 30). Offord teaches that salts may be added to increase the rate of adsorption of anionic and cationic polymers onto the cellulose-containing fibers (column 3, lines 20 – 30).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Urben (US 5,562,739).

Urben is directed to a lyocell fiber treatment method (Title).

Urben teaches that a woven or knitted fabric comprising lyocell fiber (column 2, lines 30 – 35) is initially dried or washed and not dried prior to the application of a solution (column 2, 28 – 36). The Examiner equates the woven or knitted fabric to Applicant's "substrate". Urben teaches that a solution comprising a chemical reagent (column 2, lines 37 – 44), an acid catalyst (column 2, lines 45 – 50) and a flexible linear polymer may be applied to the lyocell fabric (column 2, lines 59 – 67). It is known that the application of a solution to a substrate would result in a wet substrate because a solution inherently contains water or a liquid substance. Urben teaches that the flexible linear polymer may be polyethylene glycol (column 3, lines 8 – 11). The Examiner equates the solution comprising a chemical reagent, acid catalyst and PEG to Applicant's "polyethylene glycol formulation" and equates the step to "exposing a substrate to a

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polyethylene glycol formulation to form a wet substrate”. Urben teaches that the fabric may dried and then cured (column 3, lines 42 – 47); the Examiner equates this step to Applicant’s “drying and curing the wet substrate to form a treated substrate”. Urben teaches that the curing reaction may occur at ambient temperature or preferably it may be carried out at elevated temperature by heating the fiber. The temperature range of the curing step may generally be in the range of 105 – 170 degrees Celsius (column 3, lines 35 – 50). It should be noted that Applicant claims that the surface temperature cannot exceed “about 220 degrees F”. Urben teaches that the curing step can occur at room temperature but additionally indicates that the curing step may generally occur at 105 degrees Celsius. It should be noted that 105 degrees Celsius is equivalent to 221 degrees F, which the Examiner submits is “about” 220 degrees F. Urben teaches that the fabric is then washed and dried. Urben notes that the washing removes catalyst and unreacted reagent and permits the pH of the dried fiber or fabric to be controlled at a desired value, for example around neutral pH (column 3, lines 52 – 55). The Examiner equates the step to “neutralizing the treated substrate” and “drying the neutralized substrate.

Alternatively, Urben teaches the claimed invention but fails to teach that the temperature does not exceed about 220 degrees F. It should be noted that the heating and curing temperature is a result effective variable. For example, as the heating/curing temperature decreases, less energy is required to create the final product. As the heating/curing temperature increases, the product is dried and cured more quickly. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create a PEG resin treated fabric wherein the heating and curing step does not exceed about 220 degrees F since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

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In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to optimize the temperature in order to create an efficiently produced cured PEG resin treated substrate.

Response to Arguments

6. Applicant's arguments with respect to claim 1 has been considered but are moot in view of the new ground(s) of rejection.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jennifer Boyd
July 14, 2005



Ula C. Ruddock
Primary Examiner
Tech Center 1700